04-18-01 04-CO # 3 03-09-01.

DATE: 03/13/2001 TIME: 23:08:43

PAGE: 1

RAW SEQUENCE LISTING PATENT APPLICATION US/09/756,551

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This Raw Listing contains the General Information Section and up to the first 5 pages.

1 2	SEQUENCE LISTING	
3	(1) General Information:	ENTERED
4	(-,	
5	(i) APPLICANTS: C. Morrow et al.	
6 7	(ii) TITLE OF INVENTION: ENCAPSIDATED RECOMBINANT	TITDAT
8	NUCLEIC ACID AND METHODS OF MAKING AND	VIKALI
9	USING SAME	
10	(111) 19999 05 090999	
11 12	(iii) NUMBER OF SEQUENCES: 23	
13	(iv) CORRESPONDENCE ADDRESS:	
14	(A) ADDRESSEE: LAHIVE & COCKFIELD	
15	(B) STREET: 28 STATE STREET	
16 17	(C) CITY: BOSTON	
18	(D) STATE: MASSACHUSETTS (E) COUNTRY: USA	
19	(F) ZIP: 02109	•
20		
21	(v) COMPUTER READABLE FORM:	
22 23	(A) MEDIUM TYPE: Floppy disk (B) COMPUTER: IBM PC compatible	
24	(C) OPERATING SYSTEM: PC-DOS/MS-DOS	
25	(D) SOFTWARE: ASCII	
26		
27 28	(vi) CURRENT APPLICATION DATA:	
29	(A) APPLICATION NUMBER: 09/756,551 (B) FILING DATE:	
30	(C) CLASSIFICATION:	
31	r	
32 33	(vii) PRIOR APPLICATION DATA:	
33 34	(A) APPLICATION NUMBER: 08/987,867 (B) FILING DATE:	
35	(2) ITHING DATH.	
36	(vii) PRIOR APPLICATION DATA:	
37	(A) APPLICATION NUMBER: US 08/087,009	
38 39	(B) FILING DATE: 01-JUL-1993	
40	(viii) ATTORNEY/AGENT INFORMATION:	
41	(A) NAME: Myers, Louis	
42	(B) REGISTRATION NUMBER: 35,965	
43 44	(C) REFERENCE/DOCKET NUMBER: UAP-004CPDV	
44	(ix) TELECOMMUNICATION INFORMATION:	
46	(A) TELEPHONE: (617) 227-7400	

RAW SEQUENCE LISTING PATENT APPLICATION US/09/756,551

DATE: 03/13/2001 TIME: 23:08:43

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47
                (B) TELEFAX: (617) 742-4214
 48
 49
 50
      (2) INFORMATION FOR SEQ ID NO:1:
 51
52
           (i) SEQUENCE CHARACTERISTICS:
53
                (A) LENGTH: 14 base pairs
                (B) TYPE: nucleic acid
54
55
                (C) STRANDEDNESS: single
56
                (D) TOPOLOGY: linear
57
58
         (ii) MOLECULE TYPE: cDNA
59
60
61
62
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:
63
64
     TATTAGTAGA TCTG
                                                                    14
65
66
     (2) INFORMATION FOR SEQ ID NO:2:
67
68
          (i) SEQUENCE CHARACTERISTICS:
69
                (A) LENGTH: 14 base pairs
70
                (B) TYPE: nucleic acid
71
                (C) STRANDEDNESS: single
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74
         (ii) MOLECULE TYPE: cDNA
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76
77
78
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
79
80
     TACAGATGTA CTAA
                                                                   14
81
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83
          (i) SEQUENCE CHARACTERISTICS:
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85
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               (C) STRANDEDNESS: single
               (D) TOPOLOGY: linear
88
89
90
         (ii) MOLECULE TYPE: cDNA
91
92
93
         (ix) FEATURE:
94
               (A) NAME/KEY: CDS
95
               (B) LOCATION: 20..845
96
97
98
         (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
99
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RAW SEQUENCE LISTINGPATENT APPLICATION US/09/756,551

DATE: 03/13/2001 TIME: 23:08:44

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100	ACA	CAGC	TAAT	CAGG	TCAG	C CA	A AA	AT TA	C CC	TA T	'A GT	G CA	G AA	C AT	'C CA	.G GGG	52	
101						Gl	n As	n Ty	r Pr	o Il	e Va	1 G1	n As	n Il	e Gl	n Gly		
102							1	_			5					.0		
103																		
104	CAA	ATG	GTA	CAT	CAG	GCC	ATA	TCA	CCT	' AGA	ACT	מידים י	ТАА	GCA	тсс	GTA		100
105			Val															100
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107									20					2.3	'			
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109			GTA															148
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110			30					35					40					
111		~~=			~	~												
112																CTA		196
113	Ser	Ala	Leu	Ser	Glu	Gly	Ala	Thr	Pro	Gln	Asp	Leu	Asn	Thr	Met	Leu		
114		45					50					55	•					
115																		
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117	Asn	Thr	Val	Gly	Gly	His	Gln	Ala	Ala	Met	Gln	Met	Leu	Lys	Glu	Thr		
118	60					65					70			-		75		
119																		
120	ATC	AAT	GAG	GAA	GCT	GCA	GAA	TGG	GAT	AGA	GTG	CAT	CCA	GTG	CAT	GCA		292
121			Glu															
122					80					85					90			
123																		
124	GGG	CCT	ATT	GCA	CCA	GGC	CAG	ΔТС	AGA	GAA	CCA	AGG	GGA	ΔСΤ	GAC	ATA		340
125			Ile															340
126	1			95			0111	1100	100	Olu	110	AT 9	GLY	105	Pap	116		
127				,,					100					105				
128	CCA	CCA	ACT	አርጥ	λCT	N CC	Cmm	CAC	ממא	C1 7 7	707	003	maa	3 mc	202	7 7 CT		200
129																		388
130	Ата	GIY	Thr	TIIL	ser	1111	ьeu		GIU	GIII	тте	GIY		Met	Thr	Asn		
			110					115					120					
131		~~~	~~~		~~-													
132			CCT															436
133	ASI		Pro	тте	Pro	vai		GIU	тте	Tyr	Lys		Trp	IIe	Ile	Leu		
134		125					130					135						
135																		
136			AAT															484
137	Gly	Leu	Asn	Lys	Ile	Val	Arg	Met	Tyr	Ser	Pro	Thr	Ser	Ile	Leu	Asp		
138	140					145					150					155		
139																		
140			CAA															532
141	Ile	Arg	Gln	Gly	Pro	Lys	Glu	Pro	Phe	Arg	Asp	Tyr	Val	Asp	Arg	Phe		
142					160					165					170			
143																		
144	TAT	AAA	ACT	CTA	AGA	GCC	GAG	CAA	GCT	TCA	CAG	GAG	GTA	AAA	AAT	TGG		580
145			Thr															
146	-	-		175	-			-	180					185				
147				_														
148	ATG	ACA	GAA	ACC	TTG	TTG	GTC	CAA	αΔT	GCG	אאר	CCD	СЪТ	ጥርጥ	ΔΔα	ΔСТ		628
149			Glu															J 2 0
150			190		u	 _u	, 41	195	7711	ALG	711	110	200	Cys	пуз	TIIT		
151			100					エクコ					200					
152	עידיע	מיזיים	AAA	CCA	בירות	CCA	CCA	ccc	CCT	አርን	CTLX	~~~	(1) N	אתרכ	7 TPC	707		c 7 c
	+			JUA	110	JUA	CCA	300	GCI	ACA	CIM	GAA	GMM	MIG	MIG	ACA		676

RAW SEQUENCE LISTING PATENT APPLICATION US/09/756,551

DATE: 03/13/2001 TIME: 23:08:44

														7.	NPI IT	SET.	S36499.raw
153 154 155	Ile	Leu 205		Ala	Leu	Gly	Pro 210		Ala	Thr	Leu	Glu 215	Glu				550477.741
156																GCT	724
157			Gln	Gly	Val		Gly	Pro	Gly	His	Lys	Ala	Arg	Val	Leu	Ala	
158	220					225					230				•	235	
159 160	CDD	CCA	ልጥር	ልርር	CAA	כידיא	אכא	አ አጥ	ጥር እ	CCT	N.C.C	איייא	አመሮ	አመር	C A C	AGA	770
161													Met				772
162					240				501	245			1100	ricc	250	nr 9	
163																	
164													TTC				820
165	Gly	Asn	Phe			Gln	Arg	Lys		Val	Lys	Cys	Phe		Cys	Gly	
166 167				255					260					265			
168	ΔΔΔ	GAA	GGG	CAC	ארא	GCC	አርአ	አአር	T								045
169			Gly						1								845
170			270				3	275									
171																	
172																	
173	(2)	INF	ORMA!	rion	FOR	SEQ	ID I	NO : 4	:			•					•
174 175	(i) GEOMETICAL GUIDI GEORGE																
176	(i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 275 amino acids																
177										acru.	•						
178	(B) TYPE: amino acid (D) TOPOLOGY: linear																
179	(D) TOFOLOGI: IIIIEAI																
180		(:	ii) N	OLE	CULE	TYPE	E: pi	rote:	in								
180 181							_										
180 181 182			ii) N ki) S				_) ID	NO : 4	l :					
180 181 182 183	Gln	(2	ci) S	SEQUI	ENCE	DESC	CRIPT	CION	: SE(Met	l eV	Uie	Gln	
180 181 182	Gln 1	(2	ci) S	SEQUI	ENCE	DESC	CRIPT	CION	: SE(Gln			Met	Val		Gln	
180 181 182 183 184		(2	ci) S	SEQUI	ENCE Ile	DESC	CRIPT	CION	: SE(Met	Val	His 15	Gln	
180 181 182 183 184 185 186 187	1	(2 Asn	ki) S Tyr	BEQUI Pro	Ile 5	DESC Val	CRIPT	TION Asn	: SE(Gln 10	Gly	Gln	Met Val		15		
180 181 182 183 184 185 186 187	1	(2 Asn	ki) S Tyr	BEQUI Pro	Ile 5	DESC Val	CRIPT	TION Asn	: SE(Gln 10	Gly	Gln			15		
180 181 182 183 184 185 186 187 188	1 Ala	Asn Ile	ki) S Tyr Ser	Pro Pro 20	Ile 5 Arg	DESC Val Thr	Gln Leu	TION Asn Asn	: SE(Ile Ala 25	Gln 10 Trp	Gly Val	Gln Lys	Val	Val 30	15 Glu	Glu	
180 181 182 183 184 185 186 187 188 189	1 Ala	Asn Ile	ci) S Tyr Ser Phe	Pro Pro 20	Ile 5 Arg	DESC Val Thr	Gln Leu	Asn Asn Ile	: SE(Ile Ala 25	Gln 10 Trp	Gly Val	Gln Lys	Val Ala	Val 30	15 Glu	Glu	
180 181 182 183 184 185 186 187 188 189 190	1 Ala	Asn Ile	ki) S Tyr Ser	Pro Pro 20	Ile 5 Arg	DESC Val Thr	Gln Leu	TION Asn Asn	: SE(Ile Ala 25	Gln 10 Trp	Gly Val	Gln Lys	Val	Val 30	15 Glu	Glu	
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180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196	Ala Lys Gly	Asn Ile Ala Ala 50	Tyr Ser Phe 35	Pro Pro 20 Ser	Ile 5 Arg Pro	DESC Val Thr Glu Asp	Gln Leu Val Leu 55	Asn Asn Ile 40 Asn	Ile Ala 25 Pro	Gln 10 Trp Met	Gly Val Phe Leu Thr	Gln Lys Ser Asn	Val Ala 45	Val 30 Leu Val	15 Glu Ser Gly	Glu Glu Gly Ala	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196	1 Ala Lys Gly	Asn Ile Ala Ala 50	Tyr Ser Phe 35	Pro Pro 20 Ser	Ile 5 Arg Pro	DESC Val Thr Glu Asp	Gln Leu Val Leu 55	Asn Asn Ile 40 Asn	Ile Ala 25 Pro	Gln 10 Trp Met	Gly Val Phe Leu	Gln Lys Ser Asn	Val Ala 45 Thr	Val 30 Leu Val	15 Glu Ser Gly	Glu Glu Gly	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197	Ala Lys Gly His 65	Asn Ile Ala Ala 50 Gln	ci) S Tyr Ser Phe 35 Thr	Pro Pro 20 Ser Pro	Ile 5 Arg Pro Gln Met	DESC Val Thr Glu Asp	CRIPT Gln Leu Val Leu 55 Met	Asn Ile 40 Asn Leu	: SEG Ile Ala 25 Pro Thr	Gln 10 Trp Met Met	Gly Val Phe Leu Thr 75	Cln Lys Ser Asn 60	Val Ala 45 Thr	Val 30 Leu Val Glu	15 Glu Ser Gly Glu	Glu Glu Gly Ala 80	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198	Ala Lys Gly His 65	Asn Ile Ala Ala 50 Gln	ci) S Tyr Ser Phe 35 Thr	Pro Pro 20 Ser Pro	Ile 5 Arg Pro Gln Met	DESC Val Thr Glu Asp	CRIPT Gln Leu Val Leu 55 Met	Asn Ile 40 Asn Leu	: SEG Ile Ala 25 Pro Thr	Gln 10 Trp Met Met Glu	Gly Val Phe Leu Thr 75	Cln Lys Ser Asn 60	Val Ala 45 Thr	Val 30 Leu Val Glu	15 Glu Ser Gly Glu Ala	Glu Glu Gly Ala 80	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197	Ala Lys Gly His 65	Asn Ile Ala Ala 50 Gln	ci) S Tyr Ser Phe 35 Thr	Pro Pro 20 Ser Pro	Ile 5 Arg Pro Gln Met	DESC Val Thr Glu Asp	CRIPT Gln Leu Val Leu 55 Met	Asn Ile 40 Asn Leu	: SEG Ile Ala 25 Pro Thr	Gln 10 Trp Met Met	Gly Val Phe Leu Thr 75	Cln Lys Ser Asn 60	Val Ala 45 Thr	Val 30 Leu Val Glu	15 Glu Ser Gly Glu	Glu Glu Gly Ala 80	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202	Ala Lys Gly His 65 Ala	Asn Ile Ala Ala 50 Gln	ci) S Tyr Ser Phe 35 Thr Ala	Pro Pro 20 Ser Pro Ala Asp	Ile 5 Arg Pro Gln Met Arg 85	DESC Val Thr Glu Asp Gln 70 Val	CRIPT Gln Leu Val Leu 55 Met	Asn Ile 40 Asn Leu Pro	Ile Ala 25 Pro Thr Lys Val	Gln 10 Trp Met Met Glu His 90	Gly Val Phe Leu Thr 75	Cln Lys Ser Asn 60 Ile	Val Ala 45 Thr Asn	Val 30 Leu Val Glu	15 Glu Ser Gly Glu Ala 95	Glu Gly Ala 80 Pro	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203	Ala Lys Gly His 65 Ala	Asn Ile Ala Ala 50 Gln	Tyr Ser Phe 35 Thr Ala Trp Met	Pro Pro 20 Ser Pro Ala Asp	Ile 5 Arg Pro Gln Met Arg 85	DESC Val Thr Glu Asp Gln 70 Val	CRIPT Gln Leu Val Leu 55 Met	Asn Ile 40 Asn Leu Pro	Ile Ala 25 Pro Thr Lys Val	Gln 10 Trp Met Met Glu His 90	Gly Val Phe Leu Thr 75	Cln Lys Ser Asn 60 Ile	Val Ala 45 Thr Asn Pro Gly	Val 30 Leu Val Glu	15 Glu Ser Gly Glu Ala 95	Glu Gly Ala 80 Pro	
180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202	Ala Lys Gly His 65 Ala Gly	Asn Ile Ala Ala 50 Gln Glu Gln	xi) S Tyr Ser Phe 35 Thr Ala Trp Met	Pro 20 Ser Pro Ala Asp Arg	ENCE Ile 5 Arg Pro Gln Met Arg 85 Glu	DESC Val Thr Glu Asp Gln 70 Val	CRIPT Gln Leu Val Leu 55 Met His	Asn Ile 40 Asn Leu Pro Gly	Ile Ala 25 Pro Thr Lys Val Ser 105	Gln 10 Trp Met Met Glu His 90 Asp	Gly Val Phe Leu Thr 75 Ala	Cln Lys Ser Asn 60 Ile Gly	Val Ala 45 Thr Asn Pro Gly	Val 30 Leu Val Glu Ile Thr	15 Glu Ser Gly Glu Ala 95 Thr	Glu Gly Ala 80 Pro	

RAW SEQUENCE LISTING PATENT APPLICATION US/09/756,551

DATE: 03/13/2001 TIME: 23:08:44

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211	Val	Arg	Met	Tyr	Ser	Pro	Thr	Ser	Ile	Leu	Asp	Tle	Ara	Gln	Glv	Pro		
212	145			•		150					155		9	Q111	O _T y	160		
213																		
214	Lys	Glu	Pro	Phe	Arg	Asp	Tyr	Val	Asp	Arg	Phe	Tyr	Lys	Thr	Leu	Arg		
215					165					170					175			
216	77.	~1	~ 1	3. 1	a	~1.	~ 7		_	_			_					
217 218	Ald	Glu	GIN	180	ser	GIn	Glu	Val		Asn	Trp	Met	Thr		Thr	Leu		
219				180					185					190				
220	Leu	Val	Gln	Asn	Δla	Δsn	Pro	Δsn	Cve	Lve	Thr	Tla	T 011	T 110	71-	T 011		
221			195		1114	71011	110	200	Cys	цуз	1111	TIE	205	гÀг	Ата	ьeu		
222													200					
223	Gly	Pro	Ala	Ala	Thr	Leu	Glu	Glu	Met	Met	Thr	Ala	Cvs	Gln	Glv	Va l		
224		210					215					220	- 1		1			
225																		
226	Gly	Gly	Pro	Gly	His		Ala	Arg	Val	Leu	Ala	Glu	Ala	Met	Ser	Gln		
227 228	225					230					235					240		
229	Val	Thr	λen	Cor	717	The	т1.	Mob	M- b	~1	7	~ 1		_,	_	_		
230	vai	Thr	ASII	per	245	THE	тте	Met	мет		Arg	GIY	Asn	Phe	_	Asn		
231					243					250					255			
232	Gln	Arg	Lys	Ile	Val	Lys	Cvs	Phe	Asn	Cvs	Glv	Lvs	Glu	Glv	His	Thr		
233		Ū	-	260		4			265	-1-	- 1	_,_	OLU	270	1115	1111		
234																		
235	Ala	Arg	_															
236			275															
237 238	(2)	TNEC		17011	T07	a=0												
239	(2)	INFO	RMAI	TON	FOR	SEQ	TD N	0:5:										
240		(i)	SEC	HENC	E CH	ARAC	тачт	מיידר	ıc.									
241		(-/							airs									
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244			(D) TO	POLO	GY:	line	ar										
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246		(11)	MOL	ECUL	E TY	PE:	CDNA											
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250		(-21/				EY:	CDS											
251						ON:		46										
252			-	_				-										
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254		(xi)	SEQ	UENC:	E DE	SCRI	PTIO	N: S	EQ II	D NO	:5:							
255	77.	a	nac	aa-														
256 257	AAC	CAA '	IGG (CCA '	TTG A	ACA (JAA (GAA A	AAA A	ATA A	AAA (GCA '	TTA (GTA (GAA .	ATT		48
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